

IN THE CLAIMS

What is claimed is:

- 1 **1.** A method, comprising the steps of:
- 2 bending a substrate by applying a force with a movable chuck portion
- 3 to orient essentially all of a surface of the substrate at a predetermined angle
- 4 with respect to an input source.
- 1 **2.** The method of claim 1, wherein:
- 2 the substrate comprises a silicon wafer having a diameter of at least
- 3 about eight inches.
- 1 **3.** The method of claim 1, wherein:
- 2 the force comprises an electrostatic force generated by a potential
- 3 difference between the substrate and the movable chuck portion.
- 1 **4.** The method of claim 1, wherein:
- 2 the movable portion comprises a split electrode electrostatic chuck.
- 1 **5.** The method of claim 1, wherein:
- 2 bending the substrate includes receiving the substrate in a recess
- 3 having a concave shape.

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1 6. The method of claim 5, wherein:

2 bending the substrate includes introducing a curvature into the
3 substrate selected from the group consisting of spherical, conical and
4 cylindrical.

1 7. The method of claim 1, wherein:

2 applying the force with a movable chuck portion includes attracting
3 the substrate to the movable portion with an electrostatic force when the
4 substrate has an essentially unbent shape, and moving the movable chuck
5 portion with respect to a stationary substrate receiving portion.

1 8. The method of claim 1, wherein:

2 applying the force with a movable chuck portion includes moving the
3 movable chuck portion with respect to a stationary substrate receiving portion
4 to bend the substrate.

1 9. The method of claim 8, further including:

2 attracting the substrate receiving portion to a curved stationary
3 substrate receiving portion with an electrostatic force.

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1 **10.** A method of processing a integrated circuit wafer, comprising the steps of:
 2 placing a wafer over a concave chuck portion ;
 3 applying a force to the wafer to conform to the concave chuck
 4 portion;
 5 maintaining the wafer in the deformed shaped as the wafer is
 6 processed with respect to an input source.

1 **11.** The method of claim 10, wherein:
 2 placing the wafer over the concave portion includes attracting the
 3 wafer with an electrostatic force to the concave portion.

1 **12.** The method of claim 12, wherein:
 2 attracting the wafer includes applying a voltage to an electrostatic
 3 chuck within the concave portion.

1 **13.** The method of claim 10, wherein:
 2 placing the wafer over the concave portion includes orienting the
 3 wafer in a first direction; and
 4 the force is applied with a movable chuck portion at an angle greater
 5 than 45° with respect to the first direction.

1 14. The method of claim 13, wherein:

2 placing the wafer over the concave portion includes contacting a

3 stationary chuck portion with a first side of the wafer; and

4 the force is applied by a movable portion to a second side of the wafer

5 that is opposite to the first side.

1 15. The method of claim 13, wherein:

2 placing the wafer over the concave portion includes contacting a

3 stationary chuck portion with a first side of the wafer; and

4 the force applied by the movable portion is an electrostatic force that

5 attracts the first side of the wafer to the movable portion.

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1 **16.** A system, comprising:

2 an input source for processing the substrate according to a

3 predetermined manufacturing step;

4 a chuck system having

5 a substrate receiving surface that receives the substrate in an

6 essentially non-deformed shape, and

7 a force applying portion that applies an attractive force

8 between the substrate and the chuck system that maintains the

9 substrate in a deformed shape.

1 **17.** The system of claim 16, wherein:

2 the input source comprises an ion implantation source.

1 **18.** The system of claim 16, wherein:

2 the substrate receiving surface has a type of curve selected from the

3 group consisting of spherical, conical, and cylindrical.

1 **19.** The system of claim 16, wherein:

2 the force applying portion includes a movable portion that moves with

3 respect to the substrate receiving surface to change the substrate from the non-

4 deformed shape to the deformed shape.

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- 1 **20.** The system of claim 19, wherein:
- 2 the force applied by the movable portion is selected from the group
- 3 consisting of electrostatic force and mechanical force.

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